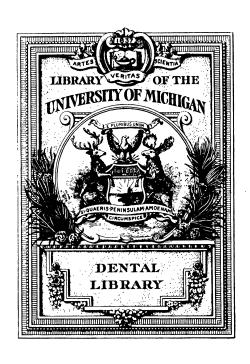
AMERICAN DENTAL JOURNAL

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Listerine Tooth Powder

Tooth powders have long been empirically employed, chiefly as a mechanical agent for cleansing the teeth, and with little regard to their composition or chemical action. Many of the articles sold for this purpose contain ingredients prone to fermentative action in the mouth, such as orris root, starch, sugar, etc., and, in addition, pumice stone, cuttlefish bone, or other harmfully abrasive substances.

Listerine Tooth Powder, possessing neither of these objectionable qualities, very acceptably meets all the requirements of a frictionary dentifrice, and promises to give much satisfaction to those who employ it, in conjunction with a mouth-wash of Listerine, suitably diluted.

To dental practitioners of record, the manufacturers will be pleased to send a supply of samples of Listerine Tooth Powder for distribution to patients.

Lambert Pharmacal Co. Saint Louis



OPERATIVE DENTISTRY.

BY R. B. TULLER, D. D. S.

EXAMINATIONS OF THE MOUTH.

As a rule people come to the dentist, to begin with, for the treatment of some particular ailment and not always for general attention to such conditions as may be found; but it is usually good practice to diagnose the case generally as far as possible or consistent at the time, for not infrequently an extended evamination leads to much light about the particular thing to be treated. It is well known how often patients come with complaint about a certain tooth which is not the cause of trouble at all.

To begin with it is usually wise to find out, by inquiry at least, what the general condition is—whether patient in general poor health or general good health.

This may be arrived at without much loss of time while patient is being seated in the chair, or in the preliminary examination of the mouth, and may to the patient, seem casual inquiry, while the knowledge gained by the operator may be of value in the more intimate investigation.

Coming to the mouth itself, it should first be examined in a general way by lifting away the lips and cheeks with the two fore fingers so that observation may be obtained of the general conditions in both upper and lower jaws, noting the conditions about the necks of the teeth and whether the gums are normal in appearance, or show evidence of trouble and disease and possibly fistulous openings that would indicate some abscessed condition. Such an observation would usually indicate to the operator what manner of care the patient has been in the habit of giving to the teeth, etc., etc. The pressure of the finger along the gums may perhaps indicate a sore spot or tenderness that would be unnoticed by mere visual observation. Closing the teeth together while cheeks and lips are distended gives opportunity to note what may be amiss as to occlusion which is well to know.

Following the above examination, use the mouth mirror to inspect the surfaces of the teeth passing from one side to the other over all the teeth both upper and lower. Many cavities of decay may thus be visually noted, as well as some obstructing deposits of tartar which must be removed usually before a thoroughly complete and satisfactory exploration can be made.

In examining for caries the mouth mirror and suitable explorers should be employed, a pair of rights and lefts and one with a single curved point, all delicately made, tempered and sharp. Together with these one needs at hand warm water and mouth syringe, floss silk, or ribbon floss, and some absorbent pellets to dry the teeth for better vision. Just where one begins to examine does not matter so long as one follows a systematic course that will insure the thorough inspection of the entire surface of each tooth. One should have at hand a diagram of the teeth denoting inner and outer surfaces on which to record the conditions found.

Some operators begin at one side and go over all the buccal and labial surfaces, with especial attention along the gum line of all the teeth on both jaws. The occlusal surfaces are then taken up in the same way so as to not overlook anything. In exploring pits and deep fissures, it is quite necessary to dry them.

Coming to the proximal surfaces, suitable floss silk is invaluable, as passing it between teeth that stand touching each other, some breaks in the enamel may be located that fine pointed explorers do not find. The rough edge of any break in the proximating surface will, upon dragging the silk back and forth, roughen up the fibers and thus tell the tale. But when such evidence is obtained it should be further and more exactly verified by forcing the teeth apart enough to permit the use of small right and left explorers adapted to this close work; and such separation usually permits of some visual examination. For this separation a tooth-pick of wood is often found useful, being so delicately tapered and shaped that it may be forced in without much discomfort or damage to the interproximal tissues. A still more exact examination may be prosecuted by using the rubber dam prior to wedging, or using some suitable separator. However, one may be well satisfied of some defect that unquestionably needs attention, when the floss silk drags, which being noted may be left for a closer determination of the nature of it, until the patient is on hand for the operation. When the enamel has become carious, between two teeth, be it ever so shallow, there is no sure means of correction save filling. Any attempt to smooth up the part or parts by the use of abrasive strips, as is sometimes resorted to, only flattens the contact point and in no sense corrects the trouble, but augments the destruction that is going on.

A dark spot on a tooth does not always indicate decay, but may be a hard discoloration without a breaking down of the tissue. Such dark spot should however be carefully tested with the explorer as decay may be progressing beneath a surface that still seems to be unbroken. If the explorer point can readily etch it, it should be treated as a cavity, which will surely take its place within a short time. The dark spot may sometimes be a condition of immunity; but in that case the exploring point cannot be made to etch or penetrate the surface by any ordinary effort.

Examinations of the mouth are perhaps most frequently called for when patients come because of some pain or discomfort that has been endured, and they can usually locate the trouble and give a history of it that helps the dentist to arrive at a correct diagnosis; but there are also many cases where the information given by the sufferer is misleading or they are not able to convey anything that gives any clear understanding. It is thus necessary, often, to make the diagnosis on a variety of tests as well as inquiry. The pressure of the finger along the gums as has been said, may result in finding a lame or sore condition not otherwise noted. Testing by the application of heat and cold may sometimes be called for, or the application of percussion on one or more teeth in the neighborhood of trouble that cannot be exactly located. Lodgment of food between two teeth very often leads to serious consequences especially when the trouble is neglected and becomes habitual. The very fact that food lodges in between the teeth at any point indicates a condition that needs correction though perhaps not yet carious. But such food lodgment continued usually leads to caries, and always to injury to the interproximal tissues.

In all examinations of the mouth the presence of deposits of tartar must not be overlooked; and especially where it has begun to trespass upon gingival tissue attachments. Usually an irritated gum line indicates some hidden deposits; but it is well always to make specific exploration for them.

In this day of electrical conveniences to be had most anywhere, the electric mouth lamp for diagnostic work in the mouth is invaluable. With one of pretty good power, it would surprise one who has not used it, to see how marvelously clear and distinct everything on the interior of the mouth is shown up. It is often superior to anything in X-ray work to locate hidden abnormalities and disturbances in the jaws, and there is no waiting to develop and print a photograph that mayhap be decidedly indistinct after all, leaving something to guess work. In a room with the shade drawn to shut out the strong daylight the mouth may be so lighted with a good mouth lamp that the alveolus, the gums and the teeth are distinctly transparent, showing in clearness the pulp of a tooth to the extreme end of the root; also a root filling. A root filling or a dead pulp in a tooth shows out in marked and dark contrast through the tooth and gums, as compared with the transparent life appearance of all else shown in the illumination. Wherever an electric current is to be had, a mouth lamp should be employed, and will prove a revelation that will be surely appreciated by any dentist who may not have before used one. It is something surely, to hold a mouth lamp on the inside of the arch of either jaw and be able to trace through the transparent gums and bone the distinct outline of the roots of the teeth, and of the pulps a shade darker. A dead pulp is opaque; also a root filling. An abscess at the end of a root shows, by its opacity, the location and extent. With the lamp held in the mouth with lips closed and room darkened any disturbance in either antrum is clearly shown. To darken the room it answers to raise an umbrella between the patient and the window. With a bright mouth lamp then in the mouth, lips closed, the whole face is illuminated like a Japanese lantern, clear to the eyes.

Of course an examination of the mouth should note all conditions found anywhere in the oral cavity and should be recorded with date, name, sex, age and the apparent general condition of the patient, on a blank having a printed diagram of the teeth and space for remarks.

(To be continued.)

BACTERIOLOGY AND PATHOLOGY.

BY GEO. W. COOK, B. S., D. D. S., CHICAGO, ILL.

DEAN OF DENTAL DEPARTMENT, UNIVERSITY OF ILLINOIS, PROFESSOR

OF BACTERIOLOGY, UNIVERSITY OF ILLINOIS.

The physical properties of bacteria, as well as all other forms of living substance is a question of their ability to assimilate, or, in other words, to utilize the substances they come in contact with as food material. The physical properties of food must depend, as we have previously said, upon three important compounds, proteids, carbohydrates and fats. The proteids, as we have stated, are the principal constituents out of which all forms of life may obtain the essentials of life; while the carbohydrates are as important as proteids in many respects, they are not always regarded as essential foodstuffs. It has been shown that the carbohydrates are the substances from which the animal tissue stores up its potential energy, and the amount of carbohydrate exists as caloric value because it can be utilized as energy to maintain the body in case of necessity. It has been shown that probably there is a carbohydrate radical in most all proteid substance and it is only split off from the proteid molecule with great difficulty.

There are certain classes of bacteria that utilize more carbohydrates than others, and many of these bacteria that require considerable amount of carbohydrate can live apparently with great comfort in what would be considered as strictly an albuminous culture media, because they can break up the nitrogenous compounds and split off what is known as the carbohydrate radical. It will be borne in mind that all living matter requires a definite amount of nitrogen to maintain its life processes, but, as has just been stated, there is an invisible amount of carbohydrate in the albuminous materials to sufficiently maintain the carbon of cell life.

To discuss all of the carbohydrates to be found in the vegetable kingdom would make a volume of material that would be of little importance to us in this connection; therefore, as a rule we refer only to that class of carbohydrates that are most conspicuous as a food material in animal tissue. They are such carbohydrates we refer to as derivatives—as polyatomic alcohol and of the aldehyde and ketone nature. These are divided by physiologists as monosaccharides, disaccharides and polysaccharides.

The disaccharides and polysaccharides are more complexed substances than are the monosaccharides, and the two former compounds are apparently synthetic compounds from monosaccharides. The monosaccharides through a condensation process become anhydrides to form a multiple group, which on hydrolytic decomposition divide into two distinct monosaccharide groups. Monosaccharides are classed somewhat according to the carbon atoms that are present in their molecule, and they can be divided into trioses, tetroses, pentoses, hexoses, heptoses, octoses, etc. In this group of monosaccharides the hexoses are really the only ones that are of especial interest as foodstuffs. The glucoses and laevuloses are found in nature as hydrolytic decomposition products from the carbohydrates. They are the substances that are so frequently found in connection with the decomposition of nitrogenous substance. It is due to the two above named compounds that bacteria obtain the essential element, carbon, in the putrefaction of an albuminous substance. They are the so-called glucosides.

As has been pointed out, all the above named monosaccharides are stereo-isomeric hexatomic alcohol and belong to the aldehydes or ketones. The so-called glucose and galactose are represented when decomposed into aldehydes, and when these aldehydes are further decomposed they pass into aldoses; and oxidation yields oxyacids which usually contains as many carbon atoms as the original substance. The strictly carbohydrate compound known as ketose gives rise to an acid when decomposed, in which the number of carbon atoms are considerably diminished in the acid compound. The oxyacids coming as they do from the aldoses are usually monobasic or dibasic, according to the amount of oxidation that has been going on. Glucose can be oxidized into gluconic acid. The gluconic acid is formed when one atom of oxygen is added to the glucose, while saccharinic acid is formed when three atoms of oxygen is added to glucose. The monobasic acids are usually derived from aldose, glucose, manose and galactose. The dibasic acids are usually derivatives from saccharinic, monosaccharides and mucinic acids. The monobasic and dibasic acids when acted upon in a certain way will produce glucuronic acid. The glucuronic acids are found sometimes in the animal body in almost a free state.

The hexoses are easily decomposed in the various forms of acids by boiling hexose with any of the dilute mineral acids, or the hexoses

can be decomposed by a certain fermentative bacteria, according to the characteristics of the specific bacterium present. In the decomposition of hexoses by certain forms of bacteria they yield butyric acids, such for instance as lactic acid, butyric acid and acetic acid, instead of alcoholic fermentation. Ethyl alcohol may be formed directly from the decomposition of hexoses, followed later by lactic acid, especially with the bacterium lactis aërogenes. If the butyric acid bucillus acts upon the hexose, ethyl alcohol is not formed. So it will be seen that the specific organism is an important factor in certain fermentative processes. In the ingestion of hexoses and glucoses in the animal body, laevulose, mamiose and galactose do not occur in the digestive processes, but pass into the liver and there form glycogen which is a polysaccharide. A question that seems never to have been definitely settled is whether or not a portion of the material passes into the liver as glucose or not. But whatever of the carbohydrate compounds do pass into the liver form the polysaccharides as glycogen. laevulose is found in various groups in roots and seeds of many vegetables and also in honey. Laevulose may also be formed through the hydrolytic decomposition of cane sugar and other carbohydrates. Laevulose is soluble in water and is distinguished from glucose by its laevorotatory power. Laevulose is easily reduced into a fermentable substance that chemically gives the same test as glucose.

Galactose is usually a product given by the hydrolytic decomposition of lactose and many other carbohydrates. On heating brain tissue with dilute mineral acids, galactose is easily distinguished from glocose, first, because it is not soluble in water and is dextrorotatory in its physical characteristics. It crystallizes in both needles and platelets. It reduces an alkaline solution of cupric oxide but to a very much less extent than that of glucose. On the oxidation of galactose we have first formed galactonic acid which is quickly and systematically oxidized into mucinic acid. According to the physiological importance it is easy to see how important it is to consider systematically all the processes of fermentation that may occur by bacteria or carbohydrates, or the fermentative changes that may be produced by the glands and tissues of the body. No one seems to have definitely settled as to how much part the mucosa takes in the changing of these carbohydrates during the assimilative process of carbohydrates into the body as food material. If one looks over the changes that are herein set

forth in the breaking up of the carbohydrates and the changes that may take place in the assimiliation of the various compounds of glucose and laevulose, it will be seen that carbohydrates go through some very wonderful and complexed changes.

The terms ferments and fermentation have created a great deal of interest in biological investigations. There has never been a more interesting problem before the world of science than the phenomena of life and the enzymatic action of the tissues of the animal body, as well as that of the high and low forms of plant life, since the early investigation of spontaneous regeneration of the conservation of energy. A historical sketch of the ferments and their action by C. Ainsworth Mitchell is an important chapter in the process and should be read by every one who is interested in this subject. The question might be asked: What do we understand by a ferment? Perhaps no better explanation can be given as to what is meant by a ferment than the one given by the author just mentioned: "A ferment is the material substratum of a peculiar form of energy which is produced by living cells and adheres more or less firmly to them without having its activity bound up with the vital process as such; this energy is in such a condition to bring about the liberation of latent energy; in such a manner that the chemical substance is so changed in the process that the new substance or the sum of the new substances produced posesses a smaller potential energy than the original substance. In this process the ferment itself remains unchanged." Strictly speaking, a substance to be broken up must be of a fermentable chemical constituent and it must be acted upon by an agent outside of itself, and the agent that ferments or breaks up the compound must do so without changing its own characteristics. For instance, the ptyalin of the saliva must bring up a carbohydrate and convert it into some of the forms of the agents that we have previously enumerated without itself being materially changed. Therefore the lactic acid bacillus can break up some of the compounds of carbohydrate and convert it into lactic acid without the bacillus itself being changed materially in its morphological or physiological activity.

(To be continued.)

Our Foreign Department

THOMAS L. LARSENEUR, D. D. S., Foreign Department Editor

RELATION BETWEEN THE DISEASES OF THE EYE AND THE DISEASES OF THE TEETH—OCULO-DENTAL PSYCHOSIS.

BY DR. M. BOREL, OCULIST.

(Le Laboratoire et le Progres Dentaire reunis, Paris, Nov. 8, 1908.)

Continued from March.

In the case of a young man 29 years old, identical symptoms, ptosis and strabismus followed by sudden cecity of the right eye, which was cured after the extraction of the second upper molar when all these symptoms of ptosis and strabismus disappeared.

With hysterical patients, the capitol for the physician is very near the tarpeian rock. In one case you remove a tooth, and blindness follows; for the same cause you extract a root to a patient who is apparently blind and our blind-man regains sight after the operation. The dentist innocently will perform miracles which will give him fame in the first instance, and in the second case may ruin his reputation and clientele.

These cases are abundant, and through researches the number of victims increase more and more. DeWitt (Amaurosis of the right eye, The American Journal of Med. Sciences, 1868, p. 283) mentions the cure of blindness of one eye by the removal of a filled tooth, but the cecity reappeared shortly after the gums were healed; nevertheless, a second cure was effected following the extraction of a sound tooth.

Harlan (Stimulated amaurosis, American Journal of Med. Sciences, 1873, p. 429) relates also a case of cecity which took place during narcosis in a dental office.

Kron (in his study on Uber hysterische Blindheit, Neurologisches Centralblatt, 1902, p. 584) says that in 49 cases of hysterical cecity, he has found the following etiology: in eight cases slight wounds, and seven cases caused by emotion purely psychic. Cases of cecity or the recovery of eyesight following odontalgia or dental operation have no other explanations than a psychic explication.

Under the following heading: 18 monate bestehende Epilepsie und Neuralgie und Neurasthenie unterhalten durch dentitio difficilis eines Wahrheitzahnes (Deutsch. Monatschrift fur Zahnheilkunde, 1189, p. 34), Nicolai relates the case of a young girl, age 20, when having a third right molar filled, when slight pressure was exerted for the packing of the filling, hystero-epileptic attacks took place and continued for a period of five months, after which the tooth was removed. The extraction was followed by severe pains in the temporal region and deafness of the right side followed.

But as Kron points out, without these ophthalmoscopic and neurolytic examinations, many of these observations are of no special benefit scientifically.

In the case of Ely (*The Medical Record*, 1882, p. 258), an orbicular paresis, accompanied with spasms of accommodation and of *Uniocular diplopia* was cured by the extraction of an upper carious molar. Now, as the uniocular diplopia is a characteristic of hysteria which points out the diagnosis of neurosis.

Baume (Faelle aus der Praxis, Deutsch. Monatschrift f. Zahnheilk, 1883), relates the case of a young girl who was suffering of facial cramps and especially of the orbicular palpbralis, and though he had located the cause in a lower molar, which was slightly decayed. After the tooth had been filled, violent cramps followed; but this symptom was cured in this case by not removing the tooth nor filling, but by auto-suggestion.

Organic troubles may take place, but they are much less frequent than ocular disturbances, which are merely functional.

Feuer (Scheff, Handbuch der Zahnheilk, 2d Ed., p. 504) tells us a case of Galezouski, in which two weeks after the extraction of three molars, a patient lost the sight of one eye through severe inflammation. But in this case there might have been iridochoroiditis pre-existing to the dental neuralgia.

V. Kaczorowski (Die etiolog. Momente v. Entzundarng des Zahnpleisches anderweitig Krankheiten, Deutsch med. Wochenschrift, 1885) says that he has himself been affected and suffered with parenchymatous keratitis infraorbital pains, extending to the teeth. The author had a molar tooth extracted and the following night was the first where relief was obtained. V. Kaczorowski admits that with him it was a case of reflex of the vaso-oculo-motor nerves.

Attempt has been made to explain certain cases of glaucomas by dental irritation, but these are between all, very doubtful cases.

Some authors claim that such ocular diseases are glaucoma and iritis will cause dental pains.

The most remarkable observation made upon the influence of ocular affections and on dental sensibility is that of J. Neuschuler, published under the heading: A case of odontalgia resulting from the insufficiency of the R. interni. (Recueil d'ophthalmologie, 1889). Every time the patient played the piano she suddenly would complain of odontalgia, although all the teeth were sound and healthy; she could read without any annoyance from the teeth. Insufficiency of convergence seemed to be in this case the cause, as prismatic lenses cured the affection.

Insufficiency of convergence is the cause of asthenopia and cephalalgia, which may extend to the teeth.

Ten years later M. Neuschuler, son of the latter, met with another case of odontalgia in connection with insufficiency of the R. externi muscles. A student, 24 years old, was complaining of insufficiency of convergence, which, under close work and study, caused cephalalgia, nausea and pains extending from the eye to the teeth, Prismatic lenses cured this condition.

Krebs (Trochlearislaehmung bei Kieferhohleneiterung. Therapeut. monatsheft., 1903), describes a case of paralysis of the obliquus superior of the eye caused by a maxillary sinuous; this case may be explained by the spreading of the suppuration, which was cured through the opening of the antrum of Hygmore and which also caused the ocular paralysis.

But aside of these rare cases we must admit that all the visual troubles, specially amaurosis, troubles of accommodation, spastic strabismus in relation with dental diseases, may be universally be explained by hysteria.

This hypotesis nevertheless is not yet admitted by all the authors, as Berger (Diseases of the eyes, Paris, 1892) sustains that amaurosis, amblyopia with construction of the visual field are resulting from the stricture of the retina (p. 198).

In the classical thesis of Dr. Pierre Ollagnier, entitled: Ocular and Auricular troubles in connection with dental affections (Lyons, 1889), a number of cases relating to this study are found, which could add a number of nondiagnosed cases of oculo-dental psychosis.

Sinuous of dental origin will furnish an unlimited field on the study of oculo-dental complications.

Germann (Deutsch. med. Zeitung, 1896, p. 1033) mentions a case of chronic neuralgia of the first ramy of the trigemenious consecutive to a case of emprema of the antrum of Hygmore. The case was first diagnosed as glaucoma which was cured only after the extraction of a decayed molar and opening into the antrum.

Panas has described an osteoperiositis of the orbit consecutive to empyema of the maxillary sinus which ended in atrophy of the optic nerves, perforation of the cranial base and cerebral abscess. A caried right upper molar in this case had been the cause of cecity; the abscess of the antrum contained the staphylococcus aureus, and that of the brains the staptococcus.

In this case the optic nerve had been compressed by the processus of the percostitis; the matastatic abscess developed in the frontal.

A frequent error in dental diseases which is often mistaken for ocular affection, is the oedema of the cheek, which in majority of cases is due to the teeth—even in acute cases where serious infiltration of the sub-cutanous cellular tissue involving the eye, may be cured by giving proper treatment to the affected tooth. If the diseased tooth is not removed in time, or if access to the antrum is not gained, the eye may become involved. Ritter (Zahn und Mundleiden mit Bezug auf atlgemein Erkrankungen, Berlin, 1897) describes the case of a young man who after having neglected a decayed tooth, was affected with an abscess of the orbit brought on by periostitis of the orbit, exophthalmos, stabismus which was completely cured in a month by the removal of the diseased tooth and opening of the antrum.

Wiecherkiewitz cites the following case (Now. Lekarskie, 1890, Nos. 6 and 7): Shortly after the extraction of a caried tooth followed and developed a case of gangrene of the palpebrae which formed an orbital abscess. The inflammation set in the meninges and the patient died from meningitis. Caspar and Ziem (Allgem. med. Centralzeitung, 1887, Nos. 48 and 49).

OUR FOREIGN DEPARTMENT

LYSOFORM IN DENTAL PRACTICE.

BY DR. FR. MUELLER, BERLIN.

(Deutsch Monatsschrift Fur Zahnheilkunde, Berlin.)

Lysoform as a disinfectant and germicide has been given a great deal of attention in the German medical literature. Lysoform is most powerful at body heat. For dental practice a 2 per cent solution at 40° C. is used, which is suitably prepared every day. To disinfect the hands, a few minutes' brushing with this soapy solution will suffice. The agreeable odor of lysoform specially recommends its use; the operator's hands and instruments remain free from the sharp odor of carbolic acid or cresol, which pervades the clothes, penetrates the room, and is exceedingly unpleasant, since the operator's hands and instruments are continually under the patient's nose. While the toxic effect of lysoform is so small that several attempts at suicide with this preparation have completely failed, its germicidal power is greater than that of carbolic acid, and even in very weak solutions prevents bacterial growth.

Over carbolic acid as well as over cresol preparations, lysoform has the advantage of having no caustic effect, either in diluted or in concentrated form. It attacks neither metal instruments nor rubber goods.

For dental practice the deodorant and disinfectant power of lysoform is of special importance. In empyema of the antrum of Highmore and in cysts a 1 per cent solution renders excellent service. A 1½ per cent solution of lysoform, flavored with some essence of peppermint, completely removes foetor of the breath. The needles used in infiltration anæsethesia can be kept in a small tube of lysoform, which will keep them free of rust, aseptic and unobstructed.

In disinfecting root-canals, pure lysoform has been found to emit the fumes of formalin in a very mild form, of which it contains about 20 per cent.

It affords thorough sterilization of putrid fields or pulp remains without any danger of periodontitis, which often follows the application of a 50 per cent solution of formalin.

It is to be hoped that further data concerning the efficacy of lysoform as root-canal dressing may be collected and published.

STOVAINE AS A MEAN OF ABORTION FOR DENTAL PERICEMENTITIS.*

Dental abscess (alveolaris pericementitis), if not treated by the dentist, or if the affected tooth or root is not removed, is generally left to take its own course. In many cases, in order to hasten its evolution, emollients and hot applications are often prescribed.

But better advice should be given. In fact, stovaine, if applied in powder form on the gingival affected area soon after the appearance of the pericementitis, will not only alleviate the pain, but the patient may attend to his general business and in certain cases it will prevent the formation of an alveolo-dental abscess.

This result, which cannot be obtained with any other analgesic, is one of the remarkable and precious medical properties of stovaine to act powerfully even on inflamed tissues.

In cases of alveolo-dental pericementitis, stovaine may be prescribed in powders containing grammes .05, which may be directly applied on the affected part.

This may be performed with the finger or by means of a thin piece of cotton upon which the stovaine has been placed. The patient is requested not the swallow the saliva, but to keep his mouth closed and to spit the least possible. The analgesic action of stovaine is somewhat rapid and is more or less persistent. When its action disappears the patient may apply another dose.

These applications may be repeated more or less frequently, according to the case. Stovaine is not very toxic, it may be given in the mouth in doses of gr. 20 and more every day without the slightest danger of poisoning.

When the affected tooth which causes the pericementitis has a cavity which is easily accessible, a piece of cotton saturated with the following solution may be placed in the tooth: Phenol (crystals), Menthol, as 1 gramme.—Gazette des Hospiteaux (July 9, 1908).

DEATH AFTER EXTRACTION.

(The Dental Surgeon, London, October 17, 1908.)

An inquest was held at Morley on September 24 on a man, age 26, who had had four teeth extracted by a dentist without "gas," as he was very nervous about taking it. An ordinary amount of

^{*}Journal Odontologique de France, Paris, December, 1908.

bleeding took place, but it set in later, and the patient went to Dr. A. Fairth, who stopped it. It recurred, however, and Dr. Fairth went to the man's home and stopped it again.

The man was very nervous and fancied that he was going to bleed to death. He became delirious and died from exhaustion and heart failure. It was stated at the inquest that death was in no way due to the dental operation.

The verdict was: "Death through exhaustion from acute mania due to nervous fright."

APPARENTLY SPONTANEOUS GANGRENE OF THE DENTAL PULP AND ITS COMPLICATIONS.

BY DR. ANDRE JOSSU.

(L'Odontologie, Paris.)

Although dental caries is the most common way by which pathogenic micro-organisms penetrate into the pulp, it is not necessary for the production of gangrene. If the pulp is destroyed by a mechanical, physical or chemical agent aided by a preexisting lesion such as caries or abrasion, the gangrene will not pass unnoticed. On the other hand, the destruction of the pulp seems spontaneous when it is due to an indirect cause such as faulty circulation, nervous trouble, or alteration of the blood. The pulp being a terminal organ, the destruction of the root-artery produces gangrene, there being no collateral channel which would balance circulation. This fact is evident in a single-rooted tooth. In multi-rooted teeth in which the pulp is vascularly irrigated by several branches, these etmplement one another unless the pulp be affected in its entirety. The term "dead tooth" is incorrect even if applied to a tooth whose pulp has lost its vitality, since the cementum still receives its vascularisation by means of the pericemental membrane. This explains the solidity with which such pulpless teeth remain implanted, preserving normal articulation.

In the etiology of apparently spontaneous gangrene of the pulp purely dental causes, causes of environnement, and general causes must be distinguished. Dental traumatism is by far the most frequent and most varied. If the traumatism is single, it must be of sufficient violence. This is often observed in children after falling or after being struck on the chin, or after suddenly and violently biting on a hard body held in the mouth. Repeated, though minimal traumatism may also cause the destruction of the pulp. This is often noted in seamstresses who are in the habit of biting thread, in persons who habitually grind their teeth, in patients with faulty articulation, etc. Traumatism is sometimes to be ascribed to dental treatment, such as rapid temporary separation, shock from extraction of neighboring tooth, regulating appliances, crowns fitted on vital teeth with imperfect articulation. The destruction of the pulp in these cases is to be attributed either to the rupture of the vascular pedicle or to the production of a priapical arthritis, in consequence of which the vascular bundle is strangled in the apical foramen and becomes obliterated by thrombosis. Faulty circulation in certain cases of hypercalcification or calcarius nodules may have the same destructive effect.

Among the causes from environment we find traumatism of the face, fractures of the maxilla, certain surgical traumatism occurring during the surgical operations, for instance, the curette striking the dental vessels, during the radical treatment of the sinusitis. Tumors may also act distructively by compression or propogation. Purulent accumulations originating in the neighboring alveolus or in the sinus may obliterate the blood vessels of the root or produce the destruction by septice trombosis. This may occur in consequence of alveolar innoculation by a foreign body, tooth-pick, hair from a tooth-brush, or a fish-bone.

In regards to general causes, of gangrene of the pulp due to nervous troubles and alterations of the blood, the etiology requires further investigation. If trophic disturbances in the proximity of the trigeminal nerve diminishes the resistance of the gingivae, infection may set in, which in conjunction with other nervous troubles may become fatal to the pulp. The direct bearing of infectious diseases upon the destruction of the pulp has not been sufficiently proved, yet indirect influence of nervous troubles, intoxications, infectious or diathetic diseases, is not to be denied.

Gangrene of the pulp occurs more frequently in adolescence from the eruption of the permanent teeth on the sixteenth or eighteenth year. At that period, the destruction of the pulp arrests cal-

cification of the tooth; often the root is not yet perfectly formed. The multi-rooted teeth are rarely affected; the single-rooted teeth, in order of the frequence of this affection, are the lower incisors, the upper incisors, and the canines. Frequently, several teeth in the mouth present dead pulps owing to the external or internal influences to which they have been simultaneously exposed. Yet their symptoms may be different and render difficult the diagnosis of the tooth responsible for a complication. Such complications arise in consequence of infection. The pathogenic germs must necessarily penetrate the apparently intact hard portions of the tooth in solutions of microscopic continuity. Enamel fissures, minute fractures, cracks, erosion, abrasion or portions of the neck which are denuded of enamel offer an entrance to the micro-organisms, which after penetrating into the inter-globular spaces of Czernak, enter the ivory tubules empty of Tomes fibres and reach the pulp chamber. Contamination by the way of the apical foramen or infection of central origin is doubtful.

The infection of the pulp does not necessarily produce complications. The germs seem to be attenuated in the pulp and do not exert themselves sometimes until very many years after its mortification. Accidents occur owing to an increase of the virulence of the microbes or owing to a diminution of the resistive forces of the organism. Local irritation of such general alterations as produced by grippe, typhoid fever, rheumatism, pregnancy, menstrual periods, over-exertion or cold, may give rise to complications.

The primordial complication is alveolo-dental arthritis, often accompanied by rarefacient cementitis. All the complications of infectious penetrating caries may ensue, with the only difference that the tooth is not carious, which condition often leads to faulty diagnosis. The symptoms although they are not infallible, consists of discoloration, opacity of an area surrounded by the lighter zone formed by the solid walls of the tooth and forming the shape of a U open toward the root, and a dull sound upon percussion. If these symptoms fail, the sensitivity of the dentine is tested by termo-cautery or by applying ethyl chloride spray on a pellet of cotton. If there is still any doubt, an exploration pit is burred which, if there is any sensitivity, is filled again. If the pulp is dead the tooth is insensitive and a nauseating odor is perceptible upon perforation of the pulp-chamber.

Even after this test the diagnosis may not yet be complete, as to which tooth is causing the complication, if there are several dead teeth in the mouth. Therefor, the seat of the pain is to be located by percussion, and symptoms such as abornmalmobility of the tooth, arthritic signs, dental crepitation must be observed, and in case of fistula retrograded exploration of the responsible root and injection of liquid must be resorted to.

The prognosis of gangrene of the pulp is favorable, except that the tooth is arrested in its calcification, becomes friable, and is handicapped in its vital resistance to infection and caries. In order to preclude possible complications, the pulp-chamber should always be cleaned, and eventually the tooth bleached for aesthetic reasons. As a rule, the opening, cleaning, sterilizing and filling of the root-canal and tooth will rapidly effect a cure in case of neuralgia, adenitis, active congestion, abscess or fistula.

In long established cases, where an apical seat of infection exists, curetting is indicated to promote cicatrization or resection of the apex. Extraction should be considered only as the very last resort, especially since the teeth most generally affected are important for mastication, phonation, and facial beauty.

ALUMINUM SOLDER.

Some important developments, says the Times Engineering Supplement of April 7, have taken place in connection with a new aluminum solder, being placed on the market by Messrs. Hemans & Son, of 61 Mark Lane, in relation to the manufacture of the article in England on a large scale. The arrangements are not yet complete, but an order for two and one-half tons has been received from America, and it is being used with what are stated to be satisfactory results by the minister of the Russian navy, and in Paris by the Motor Omnibus Company, De Dion Bouton Daimler, Delaunay Belleville, etc., for the repair of the motor car gear cases and crank chambers. which the solder has been subjected include the immersion for some months of pieces of aluminum soldered together in a strong solution of brine, the pieces afterwards having been hammered out cold, the joint not showing any apparent sign of fracture; while other specimens demonstrate that the solder is applicable for joining aluminum to brass. The solder is at present being manufactured in Geneva and Paris .- The Dental Surgeon.



TOOTHSOME TOPICS.

BY R. B. TULLER.

We're out in our summer home taking our vacation, an' it is fine.

We're out at Bunkumherst on the banks of Deep Water, which ar 173/4 miles from Chicago, 1/2 way to Joliet.

I don't spose you kno mutch about Bunkumhurst, 'cause they wasn't enny fore this summer. Ma named it.

It ar a place of grate buty an' fine seenery, an' it is bound, pa sez, to be a fashenerable place, clost an' convenient to Chicago. Pa pict it out.

Pa has got a lot of fore site as well as hind site, and so he pict out this site, an' we spect to get ritch and welthy.

Deep Water is part of the illinoy deep watter sistem an' some day wil be teaming with all kines of kraft includin' government gun botes pa sez, an' this place what he pict out an ma named, is likely to be 1 of 2 things or both, a fashenerable watterin' place er a thrivin town—er both.

Of cours they aint mutch here now, cept the deep watter an' the banks, which ar the pictcheresk. Ther ar one tree neer our bunger-low whitch pa sez is nodout 3 hundred er more yeers old, an' it is noted fer bein' a place wher injuns uster stop an' rest an' counsil an' sort out their skunk skins fore goin to Fort Deerborn to sell 'em, an' to sort their selves out after they had exchanged skins fer fire watter an' wer going back to lone Rock, etc. Yoo can acshually smell the skins now, an' ma sez she can smell them injuns too, she thinks.

Neer to our bungerlo an' this aged tree, a spring of watter breaks rite out an' runs down to the drainage canal—I meen into Deep Watter. Ma sez dont call it drainage canawl. This ere spring pa sez is of grate medicinal value, which the injins knew but which the White man didn't kno til pa jest thinkin' it mite sho wunderful properties, he had a bottle ful annerlized an' it has a stonished all

conserned, which is pa an' ma an' me. Pa sez it will cure enny old thing, on'y ther aint so much ov it, an' henst the price per small bottel must be hi.

Well, this here Bunkum Spring is what ar goin' to make the place a grate watterin resort, an' us ritch an' welthy an' on'y 173/4 milds from Chicago—1/2 way to Joliet.

Pa was wanderin' down here one Sunday, when he discovered this wonderful place an' spring an' quickly at once saw the great future in it, but did n't put the other fellers with him, on.

He went home, lookt up who own the land, sneekt down an' made a offer, an' bot 4 akers with a opshun on 4 hundred rite in the very heart of Bunkum Hurst where lots will sell for 700 dollars a foot an' corner lots for more.

On the property wuz a hous what had been used to lodg an' feed dagos an ginneys when they was diggin the Deep Watter Way, an' pa jest thot how eezy it waz to remoddel it into a bung er loo which we hav did by smokin' it out first an' then changin sum doors an' windows an' puttin in sum screens an' curtins to make more rooms an' white washin the hull thing. Ther is plenty ov room to grow fer they aint enny other hous er bung erlo fer 3 milds. Ma sez she allus wuz inklined to be exclusive, an' out her there is no one to interfeer with our deprivations, an' wont be until we begin to sell off town lots.

Pa has pict out the corner where he is goin' to hav his office on the 9th or tenth floor, an' he sez when the fashenerable array begins to pour in here each summer, then he will begin to get feez that will make sum of them Chicago men an' elsewher look green.

Pa has got a great hed on him; but ma sez he smokes too mutch and when he gits dozzy his pipe drops out of his mouth. All the same we hav got a summer home er bung er lo and we ar gettin' fresh air an' livin' neer the ground. An' pa is goin' to bild a steem launch to ply between Bunkum hurst an' Chicago, an' I am bildin' sum little sale botes to sale on Deep Water.

As far as we can, pa is goin' to set out ten thousan shade trees an' lay out streets an' put down cement walks. He's bot a lot of crush stone an' stuff from the Deep Watter Way bord to make the concrete of. From a lot of other stone what is alreddy dug pa expects to bring influence to hav a stone depot bilt, also a post office, an' custom house, an' a sutiable dock, etc., etc., an' then there'll be

ee nough left to bild a fine town hall and a perlice and fire station.

Mour'n likely pa'll be the mayor of the town an' perhaps collecter ov the port, an' wear goin to bottel the Bunkum Spring Watter an' send it all over the country an' we're goin to be ritch an' welthy an' I am a only son.

Gee! but it is grate out here. No stile now, jest living neer nature; ma jest wares a rapper, an' goes barefooted. It is good fer korns. Pa's sittin round on the shady side of our bung a loo with his chare tilted back agin the whitwash booards, an smokin' full of peece an' contentment an' dreemin' of the future ov Bunkumhurst an ten story blocks an' fashenable hotels, all which he will own the grownd of, an' I, his own an onliest son will be a young man with a otter mobeel and a moter bote and some fast horses an'—Oh, shucks! there goes pa's pipe agin. Dog gone it all!

ENLARGEMENT OF THE FAUCIAL TONSILS.

BY HENRY GLOVER LANGWORTHY, M. D., DUBUQUE, IOWA.

Although a discussion of enlarged tonsils is becoming a common one in dental literature there are some features that are being overlooked and which should be mentioned even before a consideration of the subject itself. The first is the lack in many dental offices of the proper instruments for even the simplest sort of a throat examination. A tongue depressor, probe nasal-speculum and head and throat mirrors are essential for any kind of an examination. It is safe to say that few real permanent advances can be made without more actual experience on the part of the dentist. The second and to my mind no less important point and one sure to bring out new features perhaps overlooked by us all, is the need of a thorough study of the anatomy of the nasal chambers, pharynx and tonsils. The dentist as well as specialist will come nearer to being master of his chosen field if he will become familiar with the anatomy of the head. Today we are looking solely to the dental and oral surgery to develop this special region teeming with possibilities long overlooked by the average general physician.

But to return to the matter at hand—Some of the evil results of enlarged tonsils may be realized more fully by a glance at the following table:

- Association with adenoids in eighty percent of the cases in children.
- 2. Mechanical obstructions to respiration and swallowing.
- 3. Excellent sites for lodgment of pyogenic bacteria which favor many acute throat infections.
- 4. Production of unhealthy conditions of the mouth, teeth and gums.
- 5. Possible influence towards maldevelopment of the normal arch, teeth and jaws.
- 6. Baneful effect on the speaking and singing voice and larynx in general.
- 7. Sources of infection for various glandular enlargement of the head, neck and mediastinum.
- 8. Direct portals of infection in many systemic diseases.
- 9. Source of such symptoms often as irritable hacking cough, expectoration of caseous plugs, etc.
- 10. One cause of fœtid breath.
- Give rise to occasional indefinite reflex pains in the neck and ears.

In addition to the above there are other factors which might be considered more directly connected with the domain of dentistry but impossible to embrace within the confines of the ordinary paper. The observations outlined by the author and based on some six hundred adenoid and tonsil operations are the facts so far as we know them today and may be accepted without hesitation—much therefore that is purely theoretical has been omitted.

CLINICAL ANATOMY AND PHYSIOLOGY.

The faucial tonsils lie between the two pillars of the fauces in a depression called the sinus tonsillaris. The tonsil is an encapsulated organ composed of lymphoid cells immeshed in a delicate reticulum of fibrous connective tissue. The surface covered with stratified epithelium, is characterized by the openings of from ten to twenty crypts, or tubular depressions, which penetrate the substance of the tonsil almost to the capsule on the outer side. As a rule the tonsil does not completely fill the sinus tonsillaris as there is often left an unoccupied space above and somewhat behind, called the supratonsillar space or fossa. There are several crypts opening into this supratonsillar space and hence if drainage of the space is prevented,

pentonsillar abscess or old-fashioned quinsy sore throat is apt to develop. Complete removal of the tonsil therefore always cures pentonsillar or better supratonsillar abscess. The outer aspect of the tonsil is rather loosely attached to the superior constrictor muscle of the pharynx and is subjected to more or less compression during the act of swallowing. Other muscles in the pillars of the fauces also tend to further compress the tonsil.

The crypts, tubular in character, tend to extend almost the entire depth of the tonsil and even divide below the surface into other tubules. Clinically the crypts and crypt mouths seem to be the source of the greatest amount of disturbance, no doubt by reason of their being filled with bacteria, food and debris. It has been shown by certain experiments that coloring matter dusted into the crypts is readily absorbed into the interior or substance of the tonsil. Grober has found that by painting the tonsils in rabbits with a sterilized emulsion of black Chinese paint the coloring matter will be carried down the side of the neck, into the blood and even blacken the pleural lining of the lungs.

The outline of the tonsil may be readily determined by examination with the probe or seizing it with forceps and drawing it toward the medium line. When this is done considerable portions of the tonsil will be seen to extend beneath the anterior pillar partly submerged as it were and out of sight. Often the tonsil is found attached to the anterior pillar below or to a fold of membrane, the plica triangularis, partially extending across the base. The clinical significance of this last is not as yet fully established.

The relation of the tonsils to the lymphatic vessels is important. Unlike lymph glands elsewhere the lymphatic vessels here have their origin directly in and about the tonsils. Clinically it is easy to understand that since these lymphatic vessels drain directly into the deep cervical chain underneath the stero-cleido mastoid muscle and from thence to the thoracic duct and into the blood, infection may readily be carried to distant parts of the body.

The chief artery is the tonsillar, a branch of the facial. It is surprising, considering the vast number of tonsil operations performed annually, that more severe post-openrative hemorrhages do not occasionally occur.

The exact function of the tonsil is not yet fully established.

There seems little reason to conclude that it should differ radically from the function of many of the lymphatic glands. The last word, however, has yet to be written on the subject of function. There is much evidence to show that very beneficial results are obtained by its removal when proven to be enlarged or the source of repeated acute inflammation of the throat.

ETIOLOGY.

Repeated acute or subacute inflammation of the tonsil in children is very apt to result in an increase in size of the organ. The term hypertrophy is rather loosely applied to this condition which is a common one between the ages of two and sixteen years. Practically all inflammations of the tonsil are due to infection of the epithelial lining of the crypts. After puberty tonsils do not seem to undergo the excessive enlargement stage although still remaining a focus for repeated infections.

PATHOLOGY.

The enlargement of the tonsils in children is due to a general increase in size of the lymphoid cellular structure and is indeed a true hypertrophy. In adults, however, owing to an actual increase in the number of connective tissue elements hypertrophy does not cover the pathological picture quite as well as the term hyperplasia.

SYMPTOMS.

Symptoms include first of all in children combined symptoms due to accompanying adenoid enlargements. A study of the preceding table will give an excellent idea of what might be termed working data. If the tonsils are very much enlarged, thick voice, irritable cough and often foul breath and expectoration of solid material or partial casts or plugs filling the crypts. Neuralgia pains sometimes shoot towards the ears from chronically enlarged tonsils.

EXAMINATION.

The throat is examined in a good light with the tongue held down by a stout metal tongue depressor. The diagnosis is made by inspection and noting the enlarged tonsils projecting into the throat. One tonsil is very apt to be irregular and larger than the other. The openings of the crypts are plainly visible and the mouths frequently seen filled with grayish cheesy material. So-called adhesions already alluded to often unite the tonsils to the anterior pillar. Examina-

tion of the naso-pharynx for adenoid vegetations should be made at the same time, either with the post-nasal mirror if possible or by feeling with the finger. In children enlarged tonsils will not be mistaken for anything else. The tonsils are detrimental on account of their size, interference with swallowing, obstruction to respiration, and as a cause of irritation and repeated acute inflammation. Through degeneration of the tonsillar tissue whatever function the tonsil may have had is lost and frequent infection favored.

COMPLICATIONS AND SEQUELLAE.

Of late the tonsils have received considerable attention from the medical profession by reason of their acting as a focus of infection to other organs in various parts of the body. There can be little question today but that the tonsils are portals of entrance for many systematic and glandular diseases. Most writers practically agree that the various pathological organisms gain an influence through the lymphoid tissues of the mouth and throat and thence to lymphatic glands, heart, lungs, kidneys and general circulation. Tuberculous infection of the cervical lymphatic glands, neck and head is also probably due to the entrance of the tubercle bacillus through the lymphoid tissue of the pharynx. Acute tonsillitis is especially serious from the standpoint of its many systemic complications.

PROGNOSIS.

It is frequently stated that parents will sometimes object to having enlarged tonsils removed on the plea, first that the tonsils have a function to perform, and second that they knew of cases in which the tonsils had been removed once or twice without benefit. In regard to the first point it may be stated that while the exact function is not known, it is reasonable to suppose that the tonsils act merely as filters, but only under normal conditions. When the structure or normal activity of the tonsil is altered in any way this function is lost and entrance of pyogemic organism actually favored. In considering the second point one can only say that very often the cases mentioned probably included adenoids as well as enlarged tonsils and that the operation for the removal of the tonsils did not include the adenoid.

TREATMENT.

In adults before any treatment is instituted it is only fair to

ask one's self the question: "Does the particular case at hand call for surgical interference?" If there are definite symptoms pointing directly to the tonsils, such as recurring attacks of acute tonsilitis, etc., the question is answered. Each case must thus be put upon its own merits. Enlarged tonsils are sometimes found in adults which have apparently produced no symptoms at all.

In children on the other hand, from the view point of the essayist at least, no such latitude should be allowed. The best treatment for enlarged tonsils effective enough to prevent future troubles of a similar kind during the growing life of the child while it may occasion some debate will eventually sift itself down to removal in the great majority of the cases. Internal medication and local applications although often relieving will not cure the condition. In fact in most instances such measures are wholly inadequate and our only recourse is to some thorough surgical procedure. It is very important that the tonsils be removed down to and including the capsule. Removal of the tonsils should also include the adenoid in every case when present. This is a point which seems for some reason to have been occasionally overlooked.

OPERATION.

In children it is better to remove the tonsils and accompanying adenoids under a general anesthetic with the patient either in the sitting position or lying down on one side. Ether is preferred by most operators, although many cases are performed under chloroform. With the patient moderately under the anesthetic a mouth gag is inserted, the jaws widely separated and tongue held down with a tongue depressor so as to obtain a good view of the throat. so-called adhesions between the anterior pillar and the tonsils are dissected clear to allow the organ to be more easily removed. If the tonsil is large and rather tough, a stout wire loop is slipped over the tonsil and drawn home, which immediately shells or snares off a complete tonsil. The prongs of a pair of forceps are usually hooked into the substance of the tonsil preliminary to snaring so that it will not be lost after removal. If the tonsil is broader, softer or irregular some form of a tonsillotome may be placed over the projecting tonsil and the part cut off. The fork on the end of the tonsillotome at the same time spears the tonsil as it is cut off and brings it away. Following the use of the tonsillotome any remaining tonsillar tissue in the sinus tonsillaris is carefully removed with punch or scissors. The author in his own cases has limited his instruments to punch, scissors or snare. Many, however, prefer the guillotine or electric wire snare. Whatever method be employed it must be remembered that it is not a good surgical principle to leave large pieces of tonsillar tissue behind. Tonsils do not recur after being once thoroughly removed.

The post-operative treatment is simple: The mouth should be kept clean by a mouth wash and the throat gently sprayed. Cold drinks, cracked ice, etc., are more agreeable than anything else in making swallowing less painful and allaying inflammation. A few tablets of Dover's powder in small doses is also useful as a general throat and systemic sedative. A white traumatic membrane usually forms over the cut surface after a day or two but disappears as soon as healing has taken place.



SOUTH DAKOTA STATE BOARD.

The next meeting of the South Dakota State Board of Dental Examiners will be held at Sioux City, S. D., July 13, 1909, beginning at 1:30 p. m. and continuing three days. Both practical and written examinations will be required of all candidates, and all applications, together with the examination fee of \$25 must positively be in the hands of the secretary not later than July 5, otherwise they will not be admitted to examination.

G. W. Collins, Secretary.

MISSOURI STATE DENTAL ASSOCIATION.

The annual meeting of the above named society was held in Kansas City May 27-29 and after selecting St. Louis as the next meeting place elected the following officers: R. E. Darby, Springfield, president; O. J. Fruth, St. Louis, first vice-president; C. C. Allen, Kansas City, second vice-president; J. F. Wallace, Canton, recording secretary; J. D. Patterson, Kansas City, corresponding secretary, and J. T. Fry, of Moberly, treasurer.

TENNESSEE STATE DENTAL ASSOCIATION.

The forty-second annual meeting of the Tennessee State Dental Association was held May 25-27 in Memphis. The next meeting will be held in Nashville. The following officers were elected: Dr. C. H. Taylor, former vice-president, was nominated for the highest office of the association, and a motion was made, and carried without a dissenting vote, to have the secretary cast the vote as unanimous. Dr. Harry Holder, of Gallatin, was elected first vice-president; Dr. Charles Tavel, of Memphis, second vice-president; Dr. J. L. Manise, Memphis, recording secretary; Dr. D. I. Dupree, Brownsville, corresponding secretary; Dr. Forest W. Meacham, Chattanooga, re-elected treasurer.

STATE BOARD OF REGISTRATION AND EXAMINATION IN DENTISTRY.

The New Jersey State Board of Registration and Examination in Dentistry will hold their semi-annual examination in the assembly chamber of the State House, Trenton, N. J., beginning Tuesday July 6th, and continue through the 7th and 8th. Practical examination held on the 6th, theoretical examination on 7th and 8th.

Practical work consists of soldering a gold or silver plate, one gold filling and one amalgam filling. Gold filling must be an approximal with an approximating tooth in position. Candidates requested to bring their patients. Photograph and preliminary credentials must accompany the application. Sessions begin promptly at 8 a. m., each day. Applications must be in the hands of the secretary ten days prior to the examination.

CHARLES A. MEEKER, D. D. S., Secretary of Dental Commission, 29 Fulton St., Newark, N. J.

GEORGIA STATE DENTAL SOCIETY.

The Georgia State Dental Society held its annual meeting at Cumberland June 2, 3 and 4. The following officers were elected: President, Dr. W. C. Miller, of Augusta; first vice-president, Dr. Geo. S. Tigner, Atlanta; second vice-president, Dr. Holmes Mason, Macon; corresponding secretary, Dr. D. L. Hill, Atlanta; recording secretary, B. H. McNeil, Athens. The next meeting will be in Atlanta. The state board also met at the same time and place and examined eighteen candidates, two of whom were colored. Sixteen applicants were successful.

GEORGIA STATE DENTAL SOCIETY.

The Arkansas State Dental Society held its annual meeting in Hot Springs May 25-27 and elected the following officers: President, Dr. G. E. Andrews, of Harrison; first vice-president, Dr. L. K. Charles, of Eureka Springs; second vice-president, Dr. E. R. Rushton, of Morrillton; secretary, Dr. I. M. Sternberg, of Fort Smith; corresponding secretary, Dr. F. C. Wilson, of Russellville; treasurer, Dr. J. W. Stephens, of Sheridan; board of dental examiners, Dr. A. T. McMillin, Little Rock; Dr. Charles Bergstresser, of Eureka-Springs; Dr. B. W. Wood, of Stuttgart; Dr. A. G. Raymond, of Fort Smith: Dr. E. H. Johnson, of Pine Bluff. About forty applicants for license under the state board were examined. The next meeting of the society will be at Little Rock.

Tipton, Mo., June 9, 1909.

Dr. G. W. Cook, Editor, Chicago:

At the forty-fourth annual meeting of the Missouri State Dental Association, held in Kansas City, May 26, 27 and 28, 1909, a resolution was adopted to reorganize the state association and redistrict the state. The following officers were elected:

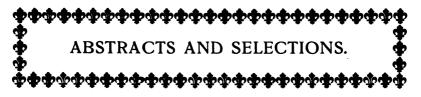
President, R. E. Darby, Springfield; first vice-president, O. J. Fruth, St. Louis; second vice-president, C. C. Allen, Kansas City; recording secretary, J. F. Wallace, Canton; corresponding secretary, F. W. Patterson, Tipton; Treasurer, J. T. Fry, Moberly.

The meeting next year will be held at St. Louis.

F. W. PATTERSON.

Tipton, Mo.

Corresponding Secretary.



DOMESTIC CORRESPONDENCE.

DR. TAGGART, AGAIN.

The Dental Review for May contains a defence by Dr. Thurston of those who are casting inlays without any pecuniary acknowledgement of their obligations to Dr. Taggart, and this writer has received one letter setting forth similar views. (A number of others have been received thanking him for the two communications about Dr. Taggart and the Dental Profession). The argument may be briefly stated without exact quotations, as follows:

It is recognized that professional men have a different standpoint from business men and that it is our duty to freely give to our fellow practitioners any knowledge or discovery found in the course of our investigations, and there are many discoveries of great value for which it is impossible to recompense the men who have given up time and money for the good of their profession, their investigations in many cases extending over their life periods, and further, "If users of casting machines other than Dr. Taggart's are thieving the privilege, then every dentist is on the same plane and under monetary obligation, the value of which it would be wellnigh impossible to compute, to a great many of our greatest researchers. Who is there among us who - can estimate the value to him of the discoveries made by our Dr. Black? Who is there who has not derived benefits from such men as our present orthodontists and Dr. Atkinson in mechanics, and has any word from any of these venerated gentlemen been forthcoming in reference to commercial obligations on the part of the profession?"

The plea for justice to Dr. Taggart does not require that we forget or disparage the services or inventions and discoveries that other men have freely given to their profession. Personally I believe that the services of Dr. Black to the dental profession have been far greater from every point of view than those of Dr. Taggart, probably greater than those of any other man of this generation. The argument ignores

an important distinction and one or two important limitations. The distinction between receiving as a free gift and demanding as a right, or taking because the giver cannot help himself. The duty of giving is necessarily limited by what a man has to give, and by what he can spare without injustice to other demands upon him, and as a matter of fact by his willingness to give, for most men concede the right of every man, professional or otherwise, to judge for himself as to what he has to give and what he can afford to give.

The duty of giving to the profession is very closely similar to the duty of giving our professional services in charity to those who cannot pay for them. Very few men would deny that obligation, but none of us would allow any one to come into our offices and demand gratuitous services, even if we knew he could not afford to pay for them. That is just about exactly what the dental profession are now doing to Dr. Taggart, and they can afford to pay him, too. It is the duty of a man who has anything valuable and interesting to say, to read papers before dental societies, but the societies do not demand that he shall travel a thousand miles to do so. They invite him, and if the distance is great usually pay his expenses, and generally speaking all professional men are allowed to be their own judges of the nature and the extent of the sacrifices that professional duty requires them to give for the benefit of their brethren.

For many years Dr. Taggart belonged in the list of the free givers to his profession, but in this instance he found himself facing an opportunity and a process or method that required for its development and perfecting an investment of time, and money, and credit, and the scattering to a great extent of his practice, that he could not possibly afford without compensation.

He believed the method would be worth enough to the profession to justify the investment, and he believed that he could require from the profession a suitable compensation for it. If the method had proved worthless or impracticable, or if very few had been willing to adopt it, he would of course have lost what he had put into it as others do who make bad investments, but it did not prove worthless, and it is pretty safe to say that twenty thousand dentists are now using the casting method. It is equally safe to say that none of them would quit if they were obliged to pay one hundred dollars apiece for the privilege, and very few would charge their patients any more

either. The only excuse for the restriction in respect to holding patents contained in the medical code of ethics is to prevent any restriction of the use of any medicine or instrument or process for the benefit of patients wherever needed, but if the principal use of this article of the code were to enable the masses of the profession to rob their benefactors, the sooner it were eliminated from the code, the better. The dental code of ethics has never had any similar section and there is nothing whatever in it to prevent any member of the dental profession from holding and enforcing any kind of a patent.

One hundred dollars apiece for twenty thousand dentists amounts to two millions of dollars, and this is a very moderate estimate of the value the dental profession themselves will put upon this process if they are ever forced to choose between paying for it or doing without it. Some of us can remember the time when there was no dentist anywhere too poor to pay fifty dollars or more every year to the Goodyear Dental Vulcanite Co., and the uses of vulcanite were not appreciably restricted nor the prices to the people appreciably increased by the millions of dollars which the Vulcanite Co. collected from the dentists at a time when their aggregate incomes were less than one-third of what they are at present.

I have written these communications because I very earnestly desire two or three things. First, that justice be done to Dr. Taggart, and even more than that I desire that our professional ideals and standards should be maintained at their highest level and that our unwillingness to pay an office license should be respected. I have seen no way to accomplish all these ends except by the purchase of Dr. Taggart's machines or individual settlements with him in sufficient numbers to fully accomplish these ends.

Dr. Thurston, in the article in the Review referred to, says: "Would the profession be justified in acknowledging the Taggart machine as being the only one and smothering the other conveniences? Does Dr. Taggart wish to cut off his generosity to the profession at the completion of his machine and say 'I wish to smother all other methods and progress along this particular line?' This is sheer nonsense. Pay to Dr. Taggart a hundred dollars because the process you have received from him is worth that much to you and take his machine or leave it as you may prefer, or having taken it lay it aside and get a better one whenever you find an opportunity, exactly as you

do with an electric furnace or a vulcanizer. It seems to me that either the winning or the losing of Dr. Taggart's suit will be very unfortunate. If he loses the result will be very disastrous to him and likely to lead to the disgrace of our profession, for a business man could plainly say to us 'If your boasted high ideals and standards of ethics call for such treatment as you are giving to Dr. Taggart then our business standards are better than yours, for we do recognize the duty of men to pay for what they get unless they receive it as a gift." If Dr. Taggart wins his suit he will have the power to collect from us the hated office licenses and to an amount in the aggregate six or eight times the price of his machines, and if he did not choose to do so it would still be a misfortune to the profession to have a decision on record that confers such a power.

Gentlemen of the profession, this case is no exception to the rule that it is wiser, is often cheaper, and always in every way more satisfactory to do what is right and discharge obligations voluntarily than to wait for the result of a lawsuit to compel us, or to permit us to repudiate just debts, as the suit may happen to result one way or the other. What I have written is not to be taken as necessarily calling in question anybody's motives or intentions. What I have desired to do is to strip the question of side issues and subterfuges and prevent, if possible, the gross misapplication of our highest ideals of service and duty to the profession. It is a personal question and it is up to you, and you, and you, the whole twenty thousand of you who are casting inlays, and I beg you, each one, to take it up and settle it in your own minds and discharge to your own satisfaction your obligations to Dr. Taggart.

There appears to be a very general demand that Dr. Taggart withdraw his suit. He faced the alternative of defrauding his creditors by becoming a bankrupt or finding out by a lawsuit whether he has any legal rights in the premises. No honest man could hesitate which to do. The profession forced this alternative and it is up to the profession to remove it.

There is perhaps enough probability that some who do not know me may suppose that I have some financial interest in the success of Dr. Taggart's suit or the sale of his machines to justify saying that I have none except that I bought one of his machines as soon as I could get it and have paid full price for it.

MECHANICAL DENTISTRY FORTY YEARS AGO.*

BY EDWIN D. DOWNS, D .D. S., OWEGO, N. Y.

If I were to confine myself to the title of my paper, I should simply say to you that "Mechanical Dentistry Forty Years Ago" consisted of rubber plate work—and sit down.

It has been suggested to m that a great many "Continuous Gum" plates had been made at the time of the organization of this society, but as my memory goes back to only nine years later, and as only a few had ever come under my personal observation, I have my doubt of it. More than that, I have become convinced by my reading in the preparation for this paper, that continuous gum work never came into general use. It was prominent in discussions then and later and I became so much interested in the subject that I learned the process; my deposit plate at college was "continuous gum."

Dr. D. D. Smith, who wrote the article on this form of work for the "American System of Dentistry" and who is a friend and advocate of the work, says in his article: "Whatever favor it may have gained from the time of its introduction, 1851 to 1860, the time of the general adoption of vulcanite, it as quickly lost out before its cheaper and more easily constructed rival. After the full introduction of vulcanite, interest in metal work—gold, silver or platinum—rapidly declined. * * * Metal plates were esteemed so unimportant that students were uninstructed in many of their forms until a generation of students came upon the stage literally incapable of mounting a tooth on a gold or silver case, and without even having as much as seen a set of continuous gum work."

Harris says of the progress of vulcanite: "* * that in 1858 not more than 300 dentists made any use of it. In 1863 nearly 3,000 used it; in 1870 not more than 300 did not use it." Therefore I think it is proper for me to say that my subject, as described by the title of my paper, is covered when I state mechanical dentistry forty years ago was rubber plate work. Of course there were men doing more or less metal work, for when this and the other district societies were organized in 1868, nearly all the organizers must have been

^{*}Read before Sixth District Dental Society, at Elmira, N. Y., October 3, 1908.

trained in metal work; but also at that time mechanical dentistry must have been near the low water mark, for—here was the easy work, the kind whose price made it possible for an enormous number of people to have dental service, heretofore debarred from it, opening up a large field for exploitation. Do you doubt the result?

The advent of vulcanite was a revolution—its general adoption seemingly a calamity. Theretofore a man had to have a considerable amount of mechanical skill to practice our profession. Mechanical skill usually means a well developed brain—but not always a sweet temper—and I think it fair to say that previous to the advent of rubber, the majority of dentists were mentally a superior lot of men. It would be interesting to trace their descendants; I think they would be found giving a good account of themselves, all doing honor to the old plate swager.

But with rubber came the flood—three months in a dental office and the boy fresh from the farm was a full fledged dentist; and this amount of tutelage to the boy from the carpenter's bench gave him the reputation of great skill, especially if he decorated his office with with a few examples of his skill in carpentry. Was he not "a real ingenious" and "a good mechanic"?

Of course these men attempted tooth filling, and no dentist who has come into practice within ten, or even a few more, years, knows how badly a tooth can be filled. The real "red rubber dentist" has passed into the Great Beyond; but what they encouraged, and where they did their great harm, was inducing people to have out whole mouths full of teeth, most of which could have been saved. Many good dentists would not admit to their confreres that they knew much about rubber work—they left that to their mechanical man,—and all the talk was of divorce of the office and laboratory. We heard of the eye and ear specialists in medicine, and of all its other specialties, and why not specialists in the different branches of dentistry.

But out of the dark groweth the dawn. Both respectable dentists and intelligent people grew sick of "the things" that not only called themselves dentists, but wrote doctor ahead of their names whenever and wherever they found opportunity; out of it all came our dental laws—and we stopped to take breath.

But the red rubber and not much else was still with us, and the talk of divorce of office and laboratory still continued.

Perhaps I ought to mention that in the meantime a supposedly higher form of rubber work had appeared; that is, a gold plate with the teeth mounted with rubber; but none too many were sufficiently skilled to do good swaging, and we continued under the dominion of plain vulcanite.

Now do not misunderstand me; I am not belittling rubber plate work; it has been an inestimable blessing to humanity, in its cheapness, in its adaptability. It has not only saved many of the poor from the pangs of dyspepsia, but it reaches cases almost beyond the adaptability of metal, and has survived through its merits. first effect on dentistry was apparently disastrous; it was like a flood before the dykes had been finished. The competent and busy operator did plate work merely to fill his odd time and feed his operating room; he paid but little attention to mechanics; the laboratory was in the hands of a mechanical dentist or more likely a student. The dentist talked divorce of operating room and laboratory, but in the meantime crown and bridge work were growing in importance, and the two rooms began to look towards reconciliation; for this work was both operative and mechanical, and in its early days at least, the work went from one room to the other quite frequently during its No longer could a man be found who denied knowledge of his laboratory or admitted his inability to make all gold crowns, and today most of us like to talk as wisely of laboratory procedure as of the operating room, for every years seems to weld them closer. Porcelain and gold inlays? Are they progress of the operative or mechanical side? You give a different shape to your cavity walls, you make a new use of the cement you long have had, but the filling is constructed in the laboratory.

We talk wisely of the survival of the fittest. Rubber must be mighty fit for dental plates for human mouths, for it has survived a lot of abuse and hammering. The discussions over it were hot and furious. We were told in dental societies discussion how harmful it was to health. Celluloid was introduced and extensively used. Those who used it, and did not use rubber, advocated its merits loudly until the license fee on rubber was no longer demanded, then celluloid faded from dental practice.

As I write I wonder if I ought to say something of the vulcanite patent; certainly it was an important factor in mechanical dentistry during a period between thirty and forty years ago. Whether it was

lack of industry or not, I do not know, but I have been unable to find its history in books in my possession. Of course, much of it is in the journals, but I did not have patience to search them.

Those who owned the rubber patent introduced a license system. The price of a year's license in Owego was \$50, but if you paid the license in the early part of January, for a year in advance, it was \$35. For a young man just starting and only getting an occasional plate to make, this was a rather serious matter.

The patent seemed easy to evade and many tried it. It seemed a matter between you and your patient. But the owners of the patent were equal to the emergency. You went along successfully for a time, then a collector appeared. He was bright and up to date, and very affable; asked you how many plates you had made of vulcanite, and advised you to take out a license. You denied the rubber, showed him your celluloid apparatus (if you had one) and said it was giving your patients universal satisfaction, and he said "good bye," and you congratulated yourself on having fooled him. A few weeks later he was back, saying he understood you had made that nice set on rubber that Mrs. Brown was wearing; you went up in the air-so did he. . Perhaps, after further excited talk, you settled. Perhaps you chased him out with a plaster knife—it was all a matter of temperament or monetary resources. It was said, the collectors had been kicked from offices so often that they could tell when a boot hit them, whether it was pegged or sewed, patent or ordinary leather; but this ability to diagnose boots has been credited to other vocations, and I think we may be permitted to doubt it. If you weakened and settled, you were duly happy, and naturally (even if meanly), perhaps began looking up evidence against some competitor who had not been caught. If instead of settling, you chased the collector out, or put up such a bluff that he went away apparently satisfied, you pretended to be happy and easy. But soon you were cited before a United States court to show cause why you should not be enjoined from making plates on vulcanite. You had refused to take a license, you had no case, and the injunction issued. No damages for the past had been asked of you, and you found yourself plodding along in your office much the same as usual, except that you were growing red-headed over business the other fellow was getting; you thought you could be careful enough not to be caught; you tried it, and found yourself

in jail for contempt of court. Oh! it was a pretty system, and the hatred of the dentist for Josiah Bacon and his assistants was unutterable. But the end came; Josiah Bacon was found shot to death in his room in the Palace Hotel, San Francisco—shot in broad daylight. For many hours (more than twenty-four) not a clue to his murderer. Then a San Francisco dentist walked into a police station and gave himself up.

On the stand he told his story, and the story of vulcanite. He was convicted in a minor degree and sentenced to ten years' imprisonment. A woman became interested, applied to dentists and dental societies to sign petitions for his pardon, and he was pardoned. I forgot how long he served, but the more errors I make in this history, the better show will some of the older ones have in further discussion.

Indirectly, at least, I think I have compared the past with the present in speaking of inlays, etc. Certainly I do not propose to bore you further with descriptions of methods and processes that are part of your daily life.

I have taken the liberty of saying something of the rubber patent, thinking that the present generation might have little or no knowledge of that period. I have not tried to be exact or specific.

All our papers at this meeting are more or less historical. It is nice to sit around our camp fire, and recall the comrades and the things that are gone, but the chief value of history is in its application. The history of rubber teaches us that the thing despised and condemned is sometimes not only the thing that survives, but may carry with it blessings not predictable.

Out of it all let us learn that there can be no divorce of the operating room and the laboratory. Let us not scorn any branch of our vocation. Let us be scholars, but we must be mechanics. I entered dentistry under the reign of rubber, and at that period when a goodly number professed to despise the laboratory, and would have divided dentistry into two social classes, the operator and the mechanic—I was infected with the sentiment prevailing—it was a false sentiment and should never be tolerated amongst us again.

The ingenious mechanician who does not neglect study and science is the man to become a dentist.

Orthodontia alone offers untold opportunities for the ingenious

craftsman, the man who can do things. Ready made apparatus you can buy, and it is good, but it is the mind of the engineer that must apply it.

The future of the laboratory is bound up, one and indissoluble with the future of dentistry; for when dentists have reached that stage of their profession when no artificial substitute for natural teeth are required, then will medicine have stamped out all disease and man will have eaten of the tree of perpetual life.—Register.

FORMULAS.

Sensitive Dentin.	
R—Cocainægr. xx	
Chloroformifl3ij	
Etherisq. s. ad fl\(\)j.	M.
Sig.—Use as directed.	
Note.—Menthol can be substituted for the cocain.	
Sensitive Dentin.	
R—Zinci chloridigr. xx	
Alcoholisfl3iv	
Chloroformiq. s. ad 3j.	M.
Sig.—Use in shallow cavities.	
$Devitalization\ Paste.$	
R—Arseni trioxidi3j	
Cocainægr. xx	
Mentholgr. v	
Lanoliniq. s. to make paste.	M.
Sig.—Use desired quantity.	
Note.—Use lampblack to color paste.	
$A nodyne \ \ \overline{R}emedy.$	
R—Menthol3j	
Thymol3ij	
Phenolis (95%)	M.
Sig.—Use wherever an anodyne is indicated in root cans	ls only.
$Putrescent\ Pulps.$	-
R-Formalini	
Creasotiāā fl3j	
Alcoholism xx.	М.
Sig.—Use as directed.	

· · · ·	
Putrescent Pulps and Abscesses.	
B-Liquoris formaldehydi	
Thymophenāā fl3j.	М.
Sig.—Use as directed.	
Putrescent Pulps.	
B-Formalini	
Cresolisāā fl 3j .	M.
Sig.—Use as directed.	
Chronic Abscess.	
R-Phenolis	
Acidi sulphuriciāā 3j.	M.
Aquae	M.
Sig.—Use where indicated.	
(Pheno-sulfonic.)	
Modified Eucalyptol.	
R—Thymolgr. ij	
Mentholgr. iij	
	М.
Sig.—Use as directed.	
Liniment.	
R-Tinct. aconiti radfl3ij	
Tinct. iodi,	
	М.
Dry mucous membrane and apply freely over affected too	th.
Liniment.	
R—Mentholgr. xx	
Chloroformi	
Tinct. aconiti rad	M.
Sig.—Use when necessary.	
-J. P. Buckley, Dominion Dental Jou	rnal.



FOR CEMENT FILLINGS.

The material of a white paraffine candle is an excellent thing to melt and smear over a cement filling—just inserted.—B. H. Teague, D. D. S., Am. Jour of Dental Sc.

WHEN TO DRINK.

I drink whenever I am thirsty. If I have thirst at the time I am eating I drink to quench the thirst, and have never had any bad re sults.—Dr. H. Fletcher, *Register*.

TOOTH POLISHING.

Dr. J. P. Buckley recommends adding sodium bicarbonate to the pumice stone used in polishing the necks of teeth after removing deposits, moistening it with cinnamon water.—Dental Summary.

EXAMPLES OF SKILL.

We see today examples of the highest skill in the making of artificial dentures on vulcanite basis, but where you see one such you will see one hundred miserable make-shifts that are unfit to be placed in a human mouth.—Dr. J. V. Conzett, Review.

COMBINATION GOLD AND PORCELAIN INLAYS.

One of the most satisfactory operations in large restorations is the gold inlay with porcelain face baked in.—Dr. A. L. LeGro, Register.

INVESTMENTS.

There is no known investment compound that when set even under perfect conditions, will expand enough to compensate for the contraction of gold when crystallizing.—Dr. A. L. LeGro, Register.

CAST BRIDGES.

A bridge can be cast separately, the dummies, and then the parts soldered together, but I do not think that there is a machine made that will cast a large bridge or plate that will fit.—Dr. M. Rittner, Register.

SIZE OF SPRUE WIRE.

I want to suggest that the size of the sprue wire is important, the one which I have adhered to closely is about 80-1,000, which is a little larger than a No. 14 wire.—Dr. M. L. Ward, Register.

TUBERCULOUS INFECTION.

In considering tuberculous infection as a cause, my experience makes me believe that alveolitis in all its stages, after its initial lesion, is more largely due to this infection than to any other.—Dr. M. H. Fletcher, Summary.

TO POLISH NICKELED INSTRUMENTS.

Submerge them for twelve hours in a saturated solution of tin chloride in distilled water. Then dry the instruments and rub them with a soft cloth or chamois leather.—La Odontologia.

NON-ABSORBENT COTTON.

Before commencing to operate, prepare a few pledgets of non-absorbent cotton, and have them in readiness. Dry the interior of the tooth and operate until the rising tide of saliva threatens, or you wish to prepare the medicament or mix your filling material; then insert one of the non-absorbent pledgets firmly in the cavity, and even though the tooth may be submerged, the interior of the cavity will remain dry until you remove the cotton and enter on another stage of the operation.—Dr. E. C. Durgee, *Dental Scrap Book*.

FUSING METAL TO PORCELAIN.

It is utterly impossible to fuse any kind of metal to a piece of porcelain. It was never known to happen. You can flow it over a piece of porcelain. Whenever a piece of porcelain and platinum come together, the difference between the shrinkage and the expansion of the porcelain causes the porcelain to crack from the stress on the pin. —Dr. C. H. Loud, Register.

PROPHYLACTIC LINES.

I have found that since I have been working and thinking along prophylactic lines, I have changed my ideas and methods considerably. For instance, while I am planning how I am going to construct a piece of bridge work one of the first requisites is the subsequnt prophylaxis for this piece of work. Can the patient keep it clean? And can I get at the cervical margins of the abutments to polish them as though they were natural teeth?—Dr. L. Bryant, Review.

PARAFFIN BATH FOR CARBORUNDUM STONES.

Carborundum stones will run truer and whirl up much less dust in dry grinding if they are soaked in melted paraffin for a few minutes. After the paraffin bath take the stones out and lay them on paper. The paper will absorb the surplus, and the stones will not be "sleazy" and disagreeable to the touch. With a stone treated in this manner one can grind a facing or artificial tooth without being compelled to inhale half of the porcelain removed. To be sure, a stone treated in this manner cannot be heated to red heat, but the paraffin bath puts it in excellent condition for effective disinfection with some liquid.—Articulator.

CAUSES OF IRREGULARITY.

The two most common causes of the irregular eruption of the permanent teeth are: First, the premature loss of the deciduous teeth, and, second, the prolonged retention of the deciduous teeth or roots. To illustrate the plausibility of the foregoing statements, the following examples may be cited: For the first permanent molar to erupt, it is compelled to make sufficient room for itself by forcing its way between the temporary second molar and the strong maxillary tuberosity above or the tough and resisting ramus below. The strain of this procedure is felt by all the teeth in the arch.—Dr. W. N. Sinn, Brief.

CAST INLAYS.

The testimony of Dr. Simpson shows that as far back as 1893 he gave a public clinic, in which he described the process of making cast inlays by means of the disappearing wax model. In making his cost inlay Dr. Simpson used a plumb-bob shaped piece of iron in which a hole was drilled to insert a sprue. He formed his pattern by placing the wax in direct contact with the cavity of the tooth, forming it exactly as he desired the finished casting. He then attached his wax model to the sprue and invested the wax model, sprue and apex of plumb-bob half way. He then fused gold in funnel shaped cavity made by the plumb-bob and forced the melted gold into the cavity.—

Brief.



Fire.—A fire in the office of Dr. George E. Baldwin, in Geneva, N. Y., caused damage to the amount of \$3,000.

Insane.—A dentist in Dillon, Mont., has been adjudged insane and has been committed to the insane hospital.

Dentistry for Love.—Promises of filling her teeth for love constituted the defense of a Chicago girl who had been sued for a dental bill. She did not have to pay.

Colored Dentists Meet.—The Physicians, dentists and pharmacists of Tennessee held their annual meeting in Nashville, June 10, and report a successful and instructive meeting.

Wants Healing Balm.—A New York City girl has sued a dentist in that city for \$15,000 for breach of promise, claiming that the dentist promised to marry her, but later she discovered he already had a wife.

Married.—Dr. Clara Duth, a dentist who has been in practice for a number of years in Peoria, Ill., was married June 9 to Judge Ralph Campbell, of the United States District Court, at Muskogee, Okla.

Peculiar Accident.—Dr. A. B. Gordon, a dentist in Bushnell, Ill., while extracting a tooth had the misfortune of having the tooth strike his glasses with such force as to shatter the glass, pieces of which penetrated the eye, painfully injuring that organ.

Southwest Virginia Dental Society held its annual meeting at Pulaski and elected the following officers: President, J. V. Haller, Wytheville; first vice-president, R. P. Copenhaver, Tazewell; second vice-president, J. G. Crockett, Pulaski; secretary and treasurer, C. A. Newland, Wytheville.

Dental School Suspended.—Dissension between the medical and dental interests in the Detroit College of Medicine and Surgery has resulted in the withdrawal of the entire dental faculty of the institution. The department will probably be discontinued and a new dental school organized.

A Position of Advantage.—"I see," said the progressive woman, that a great many members of our sex are practicing dentistry with great success." "Yes," answered Miss Cayenne. "Some of us would go to any pains in order to be in a position to absolutely monopolize the conversation."—Washington Star.

Nitrous-Oxide Jag.—A New York City man arrested for abusing his wife presented the novel plea that he was under the influence of nitrous oxide gas, administered by a dentist and was not responsible for his conduct. The wife, however, said the story was "bunk," and that he got the gas in liquid form at O'Toole's saloon.

Third District Society of New York was held in Albany April 20. The following officers were elected: President, G. A. Englert, Catskill; vice-president, Morton Van Loan, Albany; secretary, C. H. Bird, Troy; treasurer, P. S. Oakley, Troy; correspondent, Dr. H. J. Kittle, Troy; editor, J. A. Scott, Rensselaer.

Burglaries.—The following dentists, all located in the Century building, in Atlanta, Ga., were robbed of amounts aggregating \$300 May 23: Drs. J. O. Gilbert, Lowe Stillman, David B. Smith, George Tigner, B. C. Williamson and Joe Seaman. Dr. Jacob Bollinger, at Nyack, N. Y., was robbed of gold to the value of \$25 recently. C. L. Anderson, Tomah, Wis., lost \$40.

The tooth of a prehistoric animal which must have been, according to scientists, fifty or sixty feet long, as tall as a small building and with a mouth big enough to bite off the top of an ordinary tree, has been brought to Chicago from Sycamore, Ill., where it was found by Axel Strober, a farmer. The tooth weighs more than ten pounds and measures almost a foot in diameter.

New Society Organized.—The Eau Claire, Chippewa and Dunn counties in Wisconsin have organized a society, the first meeting being held at Eau Claire. The following were elected as officers for the ensuing year: President, Dr. Baily, Chippewa Falls; vice-president, Dr. Clark, Menomonie; secretary, Dr. Mason, Eau Claire; treasurer, Dr. Robinson, Chippewa Falls; librarian, Dr. Brooks, Colfax.

New Illinois Dental Bill.—The Clark bill has been signed by the governor, and thus becomes a law. The attorney-general, however, criticises the bill, declaring that part of it, which relieves a dentist from jury service, to be null and void, as it does not harmonize with the title of the bill. He is also of the opinion that the clause giving to the board the power to fix the amount of the fee to be paid by dentists already in practice subject to serious objection as the regulation of fees is a legislative function. The bill, however, provides a maximum fee of \$1.

Removals.—Drs. A. H. Blome, from Clinton, Ill., to Rantoul; W. B. Jones, from Utica, N. Y., to Syracuse; Frank D. Burns, from Ouray, Colo., to Durango; Chester Fordyce, from Guthrie, Iowa, to Fairfield; W. M. Long, from West Liberty, Iowa, to Boulder, Colo.; E. M. Keefe, from Casey, Iowa, to Des Moines; E. A. May, from Brandon, Miss., to Jackson; Ruel May, from Silver Creek, Miss., to Jackson; C. W. Digges, from Mexico, Mo., to Columbia; Robert Seyfert, from Philadelphia, Pa., to Lebanon; A. J. Brock, from Clarence, Iowa, to Grinnell; G. W. Hageman, from Iowa City, Iowa, to Clarence; A. M. Wilkes, from Le Roy, Ill., to Clinton; Waterhouse, from Farley, Iowa, to Waukon; W. L. Berryman, from Malta, Ill., to Amboy; A. H. Blome, from Chicago, Ill., to Rantoul; J. E. Fickling, from Yankton, S. D., to Plainview, Neb.; Harry Mathews, from Carlisle, Ky., to Paris, Ky.



Dr. S. R. Fuller, one of the oldest dentists in Michigan, died June 6 at Eaton Rapids. He was 82 years old.

Dr. James D. White, a dentist 75 years old, was found dead in a gas-filled room in Philadelphia, Pa., May 25.

Dr. Frank M. Comfort, a Pueblo dentist, died in the hospital at Denver, Colo., where he had gone for treatment. He was 37 years old.

Dr. Oramel Newell, a dentist in Mansfield, Pa., died at that place May 23. He was 70 years old and was in active practice until two weeks prior to his death.

Dr. F. B. Tima, a young dentist in Tama, Iowa, died at that place May 26 of typhoid fever. He was a graduate of Northwestern University Dental School, class of 1900.

Dr. Daniel S. Chase, a dentist in Medford, died recently in that place at the age of 90 years. He is said to have been the discoverer of the process of preparing gold foil for filling teeth.

Dr. William J. Miller, a dentist 64 years old, died at his home, in Galesburg, Mich. He had practiced for many years in Chicago, removing to his old home in Galesburg five years since.

Dr. W. S. Huber, a dentist in Lebanon, Pa., died in that city May 25. Dr. Huber was born in Lebanon, was a graduate of the University of Pennsylvania and a member of the Lebanon Dental Society, which held a meeting taking action on the death of a member.

Dr. David G. Colwell, a dentist in Ithaca, Mich., died in that place May 26. He had recently returned from a trip to the Isle of Pines, where he had gone in search of health after an attack of typhoid fever. He was a graduate of University of Michigan, class of 1900.

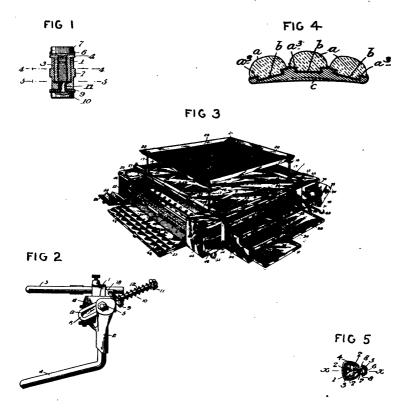
Dr. John T. Crouch, a dentist formerly of La Grange, Ill., died of smallpox at Puna, India, where he had gone early in the year for the purpose of practicing at that place. He was a graduate of the Keokuk Dental College in 1905, and had been demonstrator in that school for three years.

E. E. Jones, a dentist, formerly located at Indianapolis, Ind., but who has for a number of years been practicing in the principal cities in China, Formosa and Java, died of smallpox in Escolta, P. I., where he had been in practice for the past year. He was 36 years old and a '99 graduate of Cincinnati College of Dental Surgery.



Fig. 1.

883,232. Dental Mouth Prop. Nathaniel L. Polinger, New York, N. Y. Filed Nov. 21, 1907. Serial No. 403,197. 1. A mouth prop comprising a barrel, an internally and externally threaded sleeve telescoping



therein, and a screw threaded shank telescoping within said sleeve. 2. A mouth prop comprising a barrel, a plurality of telescoping sections fitting therewithin and a cushion holding socket swiveled to said barrel. 3. A mouth prop comprising a plulality of telescoping sections mounted

for relative rotation and screw threaded together, the two end sections having cushion-carrying sockets swiveled thereto.

Fig. 2.

912,748. Dental Articulator. George B. Snow, Buffalo, N. Y. Filed Sept. 28, 1907. Serial No. 395,050. The combination in a dental articulator of the sections 1 and 2, the joint slides 6 journaled into gripping sockets 7 in the ends of section 1, joint pins 5 secured in section 2 and received into slots 8 in the joint slides 6, and the spring 10 bearing upon the flange 9 and detachably secured to the cross pin 14 by means of the hooked rod 12.

Fig. 3.

893,155. Dental Bracket Table. Paul W. Evans, Washington, D. C. Filed Nov. 1, 1907. Serial No. 400,205. 1. A dental bracket table provided with a series of bottle or jar supports at one side, a series of bottles or jars mounted in said supports, a series of pivoted arms over said bottles or jars, covers for said bottles or jars pivotally connected to said arms and provided on their under faces with cushions, a spring for each cover, and means co-operating with said springs and pivoted arms to retain the covers in either a closed or an open or raised position.

Fig. 4.

911,078. Artificial Tooth. Frederick Sheinman, New York, N. Y. Filed June 19, 1908. Serial No. 439,272. 1. An artificial tooth or tooth facing, the back of which is provided in the opposite side portions thereof with longitudinal recesses having backwardly and laterally facing walls, the laterally facing walls being concave and undercut. 2. An artificial tooth or tooth facing, the back of which is provided in the opposite side portions thereof with longitudinal recesses having backwardly and laterally facing walls, the laterally facing walls being concave and undercut, said tooth or tooth facing being also provided with a thin metal back which is swaged thereto and into said recesses.

Fig. 5.

911,398. Artificial Tooth. James W. Ivory, Philadelphia, Pa. Filed Aug. 22, 1908. Serial No. 449,813. 1. In a tooth, a body portion, a neck and a cup-shaped modular projection integral therewith facing the concavity of the tooth co-operating with a plate to prevent displacement of said body portion. 2. In a tooth, a body portion, a neck and a modular projection integral therewith, said projection being cup shaped and having side extensions thereon to prevent displacement of said body portion.

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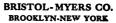
"Anesthetic" Laws.—The British Dental association is making strenuous efforts to modify the anesthetics bill which was presented to the house of commons last month. The object of the bill is to prevent the administration of anesthetics by unqualified persons, and it is proposed to effect this by prohibiting the administration of any general anesthetic by other than a legally qualified medical practitioner and by enacting that after Jan. 1, 1911, no person may be registered under the medical acts unless he shall have produced evidence that he has received theoretical and practical instruction in the administration of anesthetics.

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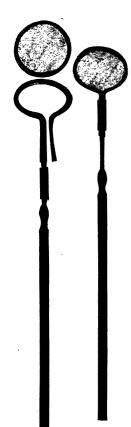
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